REMARKS

Claims 1 through 21 are in the case.

Claims 1, 5, 9, 19 and 20 are being amended to conform to the requirements stated in the Office Action of November 7, 2002.

The Office Action of November 7, 2002 states as follows:

Drawings

1. The drawings are objected to because the word "Figur" used to label each of Figures 1 and 2 should be changed to --Figure--. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Applicants enclose a corrected drawing sheet with Figs. 1-2.

The Office Action continues:

Specification

2. The abstract is objected to. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The word "invention" on lines 1 and 7 is legal phraseology that needs to be removed.

An Abstract of the Disclosure is attached to the present amendment.

The Office Action further states as follows:

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION. (b) CROSS-REFERENCE TO RELATED APPLICATIONS. (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT. (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted

on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.) (e) BACKGROUND OF THE INVENTION. (1) Field of the Invention. (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98. (f) BRIEF SUMMARY OF THE INVENTION. (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S). (h) DETAILED DESCRIPTION OF THE INVENTION. (i) CLAIM OR CLAIMS (commencing on a separate sheet). (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet). (k) SEQUENCE LISTING (See MPEP § 2424 and 7 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821 (a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Applicants are amending the application to conform to the guide lines.

The Office Action further states as follows:

Claim Objections

4. Claims 9 and 20 are objected to because of the following informalities: on lines 3 and 6, respectively, "medium is collected which has" should be changed to --medium collected has--.

Appropriate correction is required.

Applicants are amending Claims 9 and 20 accordingly.

The Office Action provides Claim Rejections under 35 USC § 112.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. 6. The claims are generally narrative and indefinite, failing to conform with current U.S.

practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. 7. Claim 1 recites the limitation "the surface on the blood contact side", "the main axis", and "the outer prosthesis wall" in lines 2, 5 and 6, respectively. There is insufficient antecedent basis for this limitation in the claim. 8. Claim 5 recites the limitation "the pumping capacity", "the pumping tubes", "the chamber" in lines 3, 4 and 5, respectively. There is insufficient antecedent basis for this limitation in the claim. 9. Claim 19 recites the limitation "the medium reservoirs" in line 8. There is insufficient antecedent basis for this limitation in the claim. 10. These are just a few examples of the 112, second paragraph rejections applicable to all the claims, based on insufficient antecedent basis for the limitations in the claims. It is applicant's responsibility to review each and claim and make any necessary corrections. 1 1. Claim 17 is indefinite because it is unclear what each of the method steps required are, as opposed to the processes that will naturally occur. Examiner suggests rewording the claim clearly pointing out what each of the method steps are. 12. Claims 8, 13, 16 and 20 should be rewritten following the Markush format for listing of elements.

Applicants are amending Claims 1, 5, and 19 to conform to the above-stated requirements.

Reconsideration of all outstanding rejections is respectfully requested.

Respectfully submitted,

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By: _____

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Abstract

The patent application [invention] relates to cardiovascular prostheses with a stable, confluent endothelial cell surface which is produced by proliferation under a shear stress. The [Said] cardiovascular prostheses are produced by [means of] using a novel method for creating a stable confluent endothelial cell monolayer. The inventive cardiovascular protheses ensure markedly improved bonding of the cells on the surface of the prosthesis and hereby enable the monolayer to be maintained even over long periods and in more demanding shear stress conditions. The [invention] patent application hereby provides the [first means] way of significantly reducing the risk of coagulation compared to uncoated prostheses which are not confluently lined with endothelial cells and prostheses which have been confluently populated but exhibit an insufficient bonding of the cells on the surface.

MARKED-UP VERSION OF THE AMENDED SPECIFICATION

Page 1, before line 1, has been amended as follows:

TITLE OF THE INVENTION

CROSS-REFERENCE TO RELATED APPLICATIONS

(Not Applicable)

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

(Not Applicable)

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05.)

(Not Applicable)

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a)

(Not Applicable)

BRIEF SUMMARY OF THE INVENTION

(Not Applicable)

Page 1, line 2, has been amended as follows:

[Description] BACKGROUND OF THE INVENTION

1. Field of the Invention

Page 1, after line 8, has been amended as follows:

2. Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

Page 9, line 9, has been amended as follows:

[Figures] BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

Page 2, after line 16, has been amended as follows:

DETAILED DESCRIPTION OF THE INVENTION

MARKED UP VERSION OF THE AMENDED CLAIMS

(Version with marking to show changes made)

1. (amended) Cardiovascular prostheses with an endothelial cell surface produced in that after an initial sub-confluent seeding of [the] a surface on the blood contact side, the formation of a confluent monolayer ensues by the cells growing under a permanent influence of defined pulsatile shear forces increasing up to physiological values, by means of streaming the prosthesis surface on the blood contact side along [the] a main axis of the prosthesis in an inner perfusion circuit and by moistening [the] an outer prosthesis wall in an outer perfusion circuit, or in a permeable medium reservoir.

6. (twice amended) Cardiovascular prostheses according to claim 1, characterized in that the mathematical value of the occurring shear forces can be adjusted by varying [the] pumping capacity, as well as by varying the size of the cross-section of [the] pumping tubes used or of any other

connecting elements outside of the chamber, as well as by the geometrical form and configuration of the very chamber.

9. (twice amended) Cardiovascular prostheses according to claim 6, characterized in that the perfusion circuits lead from one medium reservoir (6) into another medium reservoir (6'), in which the medium [is] collected [which] has already streamed through the prosthesis.

19. (twice amended) The method according to claim 17, characterized in that in an inner perfusion circuit (5) for streaming through the inner prosthesis space along the main axis of the prosthesis inside of the chamber (2), the prosthesis (1) is fixed by means of adapters (3, 3'), and hence as such constitutes the inner perfusion circuit (5), and that an outer perfusion circuit (5') exists for outwardly streaming the prosthesis (1) in the same chamber (2) which, towards the outside, comprises for the two circuits (5, 5') connectors to a pumping device (7) and [the] medium reservoirs (6, 6') which also have the function of pressure equation reservoirs.

20. (twice amended) The method according to claim 17, characterized in that

a) the outer perfusion circuit (5') can be operated in co-current or counter-current to the inner perfusion circuit (5), but also statically,

b) the two perfusion circuits (5, 5') do not work as a closed system but lead from one medium reservoir (6) into another medium reservoir (6'), in which the medium [is] collected [which] has already streamed through the prosthesis,

c) the inner and the outer perfusion circuits have different medium reservoirs or one and the same medium reservoir (6, 6'), and

d) the two perfusion circuits (5, 5') unite inside the chamber (2) after having streamed the prosthesis (1), but leave the chamber (2) in separate perfusion circuits (5, 5').